Coulomb excitation

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong and Kang Mengxiao	NDS 133, 221 (2016)	1-Dec-2015

^{198}Pt(x,x′):
x=^{16}O; E=42 MeV (1969Gl08)
^{198}Pt(x,x′γ):
x=p; E=4.5 MeV (1971Mi08), E=5-6 MeV (1984Mu19).
x=α E=10,15 MeV (1970Br26), E=5-6 MeV (1984Mu19), E=15.6 MeV (1971Mi08), E=14-15 MeV (1986Gy04).
x=^{12}C; E=41-45 MeV (1986Gy04), E=41 MeV (1988Fe08).
x=^{16}O; E=36 MeV (1966Gr20), E=41 MeV (1970Br26), E=43.8 MeV (1971Mi08), E=55-56 MeV (1986Gy04), E=57-63 MeV (1988Fe08).
x=^{32}S; E=80 MeV (1983St01,1983St18).
x=^{40}Ca; E=120 MeV (1979Ha06).
x=^{58}Ni, E=220 MeV (1981Bo32,1981St13,1981St24, see also 1980Ke04)
x=^{81}Br, E=190 MeV (1979Ha06).
γ(θ,H), recoil distance (1981St13,1981Bo32, see also 1980Ke04)

^{198}Pt Levels

E(level)†	Jπ#	$T_{1/2}$‡	Comments
0.0	0+		
407.2	2+	22.25 ps *15*	$T_{1/2}$: Deduced from B(E2)=1.090 *7*. B(E2): Adopted value=1.090 *7* (1986Gy04). Others: 1.01 *5* (1969Gl08), 1.02 *15* (1966Gr20), 0.97 *3* (1970Br26), 1.02 *4* (1971Mi08), 1.06 *3* (1984Mu19). Additional information 1. Q=+0.42 *12* or +0.54 *12* (1986Gy04). $T_{1/2}$: Others: 24.3 ps *21* (1981Bo32), 23.2 ps *8* (1983St18).
774.2	2+	27 ps *4*	Additional information 2.
985.8	4+	3.3 ps *3*	Additional information 3. B(E4)=0.09 *9* (1988Fe08).
1280.0	2+	9.7 ps *5*	
1285.0@	4+	9.3 ps *22*	
1714.7	(6+)	<0.7 ps	

† From Eγ′s by using least-squares fit to data. Eγ′s are from 1981Bo32.
‡ From recoil-distance measurement (1981Bo32), except as noted.
# From Adopted Levels.
@ The authors assign the 510.8γ as de-exciting the 914, 0+ level known from β− decay; however, as shown by 1983Ya04 in (n,n′γ), the energy of this transition is 507.3. They suggest the reassignment of the 510.8γ as de-exciting the known 1285, 4+ level.

γ(^{198}Pt)

E_i(level)	J_i^π	E_γ†	I_γ‡	E_f	J_f^π	Mult.	δ	Comments
407.2	2+	407.2	100	0.0	0+			
774.2	2+	367.2	96 *2*	407.2	2+	D+Q	−2.9 *+4−6*	Mult.,δ: From γ(θ,H) measurements (1981St13,1981Bo32).
		774.2	4 *2*	0.0	0+			
985.8	4+	578.6	100	407.2	2+			
1280.0	2+	505.8	73# *6*	774.2	2+			
		872.6	27# *6*	407.2	2+			

Continued on next page (footnotes at end of table)

Coulomb excitation (continued)

$\gamma(^{198}Pt)$ (continued)

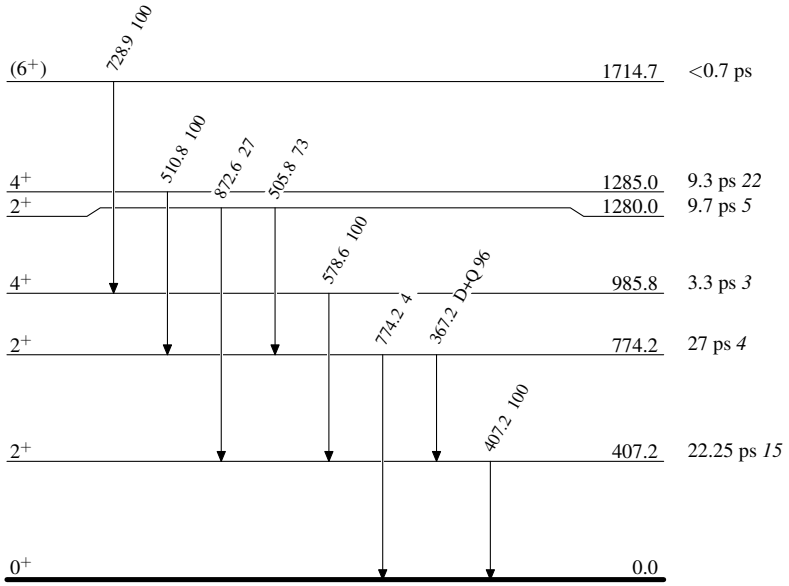
E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π
1285.0	4^+	510.8	100	774.2	2^+
1714.7	(6^+)	728.9	100	985.8	4^+

[†] From 1981Bo32.
[‡] Relative γ branching from each level.
[#] Branching ratio is discrepant with the value in (n,n′γ).

Coulomb excitation

Level Scheme

Intensities: % photon branching from each level



$^{198}_{78}Pt_{120}$